

# Notice of Allowability

Application No.

10/715,996

Examiner

Jason R. Kurr

Applicant(s)

GROVE, DEBORAH M.

Art Unit

2615

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to correspondance dated November 18, 2003.
2. ☒ The allowed claim(s) is/are 1-28.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 12/23/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 5/10/07.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

### EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Lowell Carson on May 10, 2007.

The application has been amended as follows:

**Claim 4:** The phrase "such that the applied force of the sensor on the test surface of the phantom" has been added to step d1 to add clarity to the claim. The word "of" has been added to step d3 to add clarity to the claim. Claim 4 now reads:

-- 4. The method according to claim 2 wherein step (d) includes the steps of: d1) detecting vibrations from the phantom with the sensor of the electronic stethoscope held in contact with the test surface of the phantom such that the applied force of the sensor on the test surface of the phantom equals a test force; d2) moving the sensor of the electronic stethoscope such that the applied force of the sensor on the test surface of the phantom equals another test force; and d3) repeating steps (d1) and (d2) until vibrations have been detected at a predetermined number of test forces.--

**Claim 10:** The first line of claim 10 has been changed to read, "A computer readable medium encoded with instructions". Claim 10 now reads:

-- 10. A computer readable medium encoded with instructions to instruct a general purpose computer to characterize the response of an electronic stethoscope, the instructions comprising the steps of: a) generating a test signal to drive a shaker coupled to a stinger rod that extends inside a phantom, whereby internal vibrations are produced in the phantom; b) receiving a motion signal from a surface accelerometer coupled to a test surface of the phantom; c) receiving an electronic stethoscope signal from the electronic stethoscope which is in contact with the test surface of the phantom; and d) calculating a transfer function for the electronic stethoscope based on the motion signal received in step (b) and the electronic stethoscope signal received in step (c).--

#### **Reasons for Allowance**

The following is an examiner's statement of reasons for allowance:

The general concept of generating simulated bodily sounds, such as heartbeat, in a test dummy or phantom was known in the art at the time of the invention, as evidenced by Gordon et al (US 3,662,076), Poylo (US 3,665,087) and Krause (US 3,888,020). The purpose of the above references is to train medical staff through the simulation of normal and abnormal body conditions. The Examiner has not found prior art that teaches or suggests the modification of the above references in order to measure surface motion of the dummy or phantom through the use of an accelerometer in addition to the stethoscope, for the purpose of calculating a transfer function to characterize the response of the stethoscope as defined in the independent claims 1, 10 and 12. Other prior art has been cited herein regarding the use of a stethoscope to

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allow a user to listen to simulations of body sounds within a dummy or phantom.

However, the other prior art of record also fails to teach or provide suggestion to arrive at the combination of the elements and steps presented in the independent claims, again when said elements or steps are collectively considered in regards to each claim. For at least the reasons listed above, the dependent claims are also allowed in view of their respective dependencies upon the independent claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gordon et al (US 3,662,076) discloses a cardiac training system.

Chouinard (US 3,055,356) discloses a heart signal generating system.

Poylo (US 3,665,087) discloses a manikin audio system.

Krause (US 3,888,020) discloses a manikin synchronization system.

Gordon et al (US 3,947,974) discloses a cardiological manikin auscultation and blood pressure system.

Amend et al (US 6,220,866 B1) discloses an electronic auscultation system for patient simulator.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason R. Kurr whose telephone number is (571) 272-0552. The examiner can normally be reached on M-F 10:00am to 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (571) 273-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JK  
JK

  
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